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Indian Standard

CODE OF PRACTICE FOR MAINTENANCE AND CARE OF INDUSTRIAL SAFETY CLOTHING

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CODE OF PRACTICE FOR MAINTENANCE AND CARE OF INDUSTRIAL SAFETY CLOTHING

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*Shri D. M. Dhar was Chairman for the meeting in which this standard was finalized.

(Continued on page 2)

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(Continued from page 1)

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(Continued on page 7)

Indian Standard

CODE OF PRACTICE FOR MAINTENANCE AND CARE OF INDUSTRIAL SAFETY CLOTHING

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 1 December 1978, after the draft finalized by the Industrial Safety Advisory Committee had been approved by the Executive Committee.

0.2 This standard is intended for use in industries by safety officers, purchasing agents, plant managers, foremen and other supervisors charged with the responsibility of proper selection, maintenance, use and repair of personal protective safety clothing.

0.3 Specifications and materials in safety clothing like aprons, hand gloves, etc, vary considerably; therefore it is very important that advice of the manufacturer be taken and instructions followed for the use and care of such clothing.

0.3.1 In this standard reference to cleaning and repair of safety clothing appears in many clauses. It is important that after any repair or cleaning, the clothing shall be tested for serviceability before being put into service.

0.4 When safety clothing are repaired, it is necessary that the base material as well as accessories used are of the same quality and characteristics as used in the fabrication of the original clothing.

0.5 In the preparation of this standard, assistance has been derived from the Safety Practices Pamphlet No. 106 'Conservation of personal protective equipment', published by National Safety Council, Chicago, which is gratefully acknowledged.

1. SCOPE

1.1 This standard lays down recommended practices in maintenance and care of industrial safety clothing.

2. LEATHER CLOTHING

2.1 Keep water, oils and acids away from leather goods as much as possible.

2.2 Wash the leather goods with saddle soap and dry in shade because it is not practicable to sterilize leather clothing.

2.3 If the wearer is not exposed to splashes of molten metal, the clothing may be repaired by patching with pieces of leather or by sewing the tear.

3. ASBESTOS CLOTHING

3.1 Wash asbestos gloves in warm soap water.

3.2 Asbestos suits shall be dry-cleaned to avoid excessive shrinkage.

3.3 Store the clothing so that asbestos fibres are not torn or crushed in handling.

3.4 Remove splashes of molten metal by cutting underneath with a sharp knife so as to damage the asbestos fibres as little as possible.

3.5 Garments may be patched or sewn as and when necessary.

4. FLAME-PROOFED FABRICS

4.1 Flame-proofed garments are usually made from cotton impregnated with flame resistant chemical solutions. The recommendations of the manufacturer shall be followed if the original flame resistant qualities of the garments are to be retained.

4.2 As and when necessary, cleaning of garments shall be done if paints, oils or grease of flammable nature get on the garment.

4.3 After dry-cleaning, garments shall be tested for serviceability in respect of flame resistant properties.

4.4 If repaired or cleaned clothings require chemical treatment to restore serviceability, such treatment work shall be done as recommended by the manufacturer, or as given in Appendix A.

5. CHEMICAL RESISTANT CLOTHING

5.1 For protection against acids, caustics, solvents and similar materials fabrics impregnated or coated with plastics are used for garments.

5.2 Consult the manufacturer on the care and cleaning precautions necessary for these special garments, and follow his recommendations.

5.3 Protect these garments from excessive heat and mechanical damage.

5.4 When harmful material gets on the garments, wash it off carefully.

5.5 Use warm soapy water for cleaning.

5.6 Never use compounds that may affect the impregnated or coated material.

5.7 Clean the garment thoroughly before storing and avoid unnecessary folding or creasing in storage.

6. RUBBER CLOTHING

6.1 Keep oil, grease and solvents away from rubber gloves, rubber boots, aprons, acid hoods and linemen's equipment.

6.2 Protect rubber equipment from excessive heat and mechanical damage.

6.3 When not in use, avoid exposing to direct sunlight.

6.4 Store and use such equipment so that it does not get cut, torn, scratched or worn by abrasive action. Avoid crushing or creasing it.

6.5 Wash and dry thoroughly before storing it; warm air drying should be used when possible.

6.6 Use talc powder for inside of the gloves to avoid sticking to the hands.

6.7 Avoid undue stretching when in use.

6.8 Be sure rubber equipment used in electrical work is thoroughly inspected and given approval tests before it is used.

6.9 Where the job permits, for protection of rubber gloves or aprons wear heavy work gloves or aprons over them.

A P P E N D I X A

(Clause 4.4)

PROCEDURE FOR FLAME-PROOFING TREATMENT OF CLOTHING

A-1. PREPARATION OF PROOFING SOLUTION

A-1.1 Heat 10 litres of water in a tank to about 75°C. Remove sufficient quantity of hot water in a separate receptacle, add 3.8 kg of boric acid to it, stir well and pour it into rest of the hot water. Then add to the mixture 6.7 kg of borax and 1.8 kg of monoammonium phosphate, and agitate well to ensure that all the salts have dissolved. Keep the temperature of the solution at 60-65°C.

A-1.2 The prepared quantity will be normally sufficient for flame-proofing 40 to 50 clothing suits at a time.

A-2. PROCEDURE

A-2.1 Wash the clothing with soap and agitate with steam in a washing machine for 2 hours. Wash with water and remove as much water as possible.

A-2.2 Then soak the clothing in the proofing solution. Keep the clothing well immersed in the solution. Soak for 20 minutes, then shift them to the drain board.

A-2.3 Remove the clothing from the drain board to a centrifuge. Start the centrifuge (speed 1 000 rev/min) and switch it off within 45 ± 5 seconds. Remove the garments from the centrifuge and dry in the sun for 4 to 6 hours or in a drying machine, or in a room till dry. Iron the clothes if desired.

A-2.3.1 The time of wringing the clothes is of extreme importance as excessive solution retained in the clothing has a deleterious action on the cloth and too little of it affects the proofing quality.

A-2.3.2 The time of wringing has to be suitably changed if the capacity and speed of the centrifuge are different from that specified (1 000 rev/min).

A-2.3.3 The spent solution can be used again after regeneration to the specified composition.

(Continued from page 2)

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INDIAN STANDARDS

ON

INDUSTRIAL SAFETY PERSONAL PROTECTIVE EQUIPMENT

IS:

- 583-1969 Ankle boots for general purposes (*first revision*)
- 1179-1967 Equipment for eye and face protection during welding (*first revision*)
- 1910-1961 Self-contained breathing apparatus for fire brigade use
- 1989-1973 Safety boots and shoes for mines and heavy metal industries (*second revision*)
- 2472-1969 Protective gaiters
- 2553-1971 Safety glass (*second revision*)
- 2573-1975 Leather gauntlets and mittens (*first revision*)
- 2745-1969 Firemen's helmets (*first revision*)
- 2925-1975 Industrial safety helmets (*first revision*)
- 3322-1965 PVC-coated fabrics for foul weather clothing
- 3521-1965 Linemen's leather safety belt and strap
- 3738-1975 Rubber knee boots (*first revision*)
- 3976-1975 Safety rubber-canvas boots for miners (*first revision*)
- 4128-1967 Fireman's leather boots
- 4501-1967 Aprons, rubberized, acid and alkali resistant
- 4770-1968 Rubber gloves for electrical purposes
- 5557-1969 Industrial and safety rubber knee boots
- 5852-1977 Protective steel toe caps for footwear (*first revision*)
- 5983-1971 Protective filters for welding, cutting, and similar operations
- 6153-1971 Protective leather clothing
- 6407-1971 Rubber aprons for hospital use
- 6519-1971 Code of practice for selection, care and repair of safety footwear
- 6994 (Part I)-1973 Industrial safety gloves: Part I Leather and cotton gloves
- 7352-1974 X-ray lead-rubber protective aprons
- 7524 (Part I)-1975 Methods of test for eye protectors: Part I Routine tests
- 7524 (Part II)-1977 Methods of test for eye protectors: Part II Special tests
- 7612-1974 Functional requirements for flame resistant and heat resistant suits
- 7692-1975 Wooden headform for testing of helmets
- 8519-1977 Guide for selection of industrial safety equipment for body protection
- 8520-1977 Guide for selection of industrial safety equipment for eye, face and ear protection
- 8521 (Part I)-1977 Industrial safety faceshields: Part I With plastics visor
- 8522-1977 Respirators, chemical cartridge
- 8523-1977 Respirators, canister type (gas masks)
- 8807-1978 Guide for selection of industrial safety equipment for protection of arms and hands
- 8940-1978 Code of practice for maintenance and care of industrial safety equipment for eye and face protection
- 8990-1978 Code of practice for maintenance and care of industrial safety clothing